

## ABSTARCT OF THE DISCLOSURE

A semiconductor storage device includes a voltage supply circuit generating a voltage of 5V, a voltage polarity inversion circuit generating a voltage of -5V, a select-and-connect circuit supplying the voltages of 5V and -5V to a memory cell array, a 5 V voltage level detection circuit detecting the voltage derived from the voltage supply circuit, and a -5 V voltage level detection circuit detecting the voltage derived from the voltage polarity inversion circuit. Absolute values of the voltages detected by the voltage level detection circuits are lower than ever before. This allows a gate insulation film to be thinner. A memory-function film is formed on both sides of a gate electrode in the semiconductor storage device. This also make the gate insulation film thinner. The thin gate insulation film suppresses the short-channel effect, so that each memory element of the memory cell array is miniaturized.